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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/777,958	12/24/1996	DONALD F. HAMILTON	02103/211002	4029
26162	7590	07/22/2008	EXAMINER	
FISH & RICHARDSON PC			LEE, PING	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 08/777,958	Applicant(s) HAMILTON ET AL.	
	Examiner Ping Lee	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The prosecution has been reopened under 37 CFR 1.198.

Priority

2. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 07/871,926, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application.

In claim 1, the limitations "a spare tire compartment" specified in lines 1-2, "having a trunk floor" in line 2, "above said trunk floor and outside said spare tire compartment" in line 7, "to cause a smaller decrease in calculated trunk volume than would occur with said at least one speaker mounted in said rear deck" are not supported or enabled by the prior application as filed on 4/21/92.

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Accordingly, claims 1, 3-6 and 8-10 are not entitled to the benefit of the prior application.

3. This application repeats a substantial portion of prior Application No. 07/871,926, filed 4/21/92, and adds and claims additional disclosure not presented in the prior application. Since this application names an inventor or inventors named in the prior application, it may constitute a continuation-in-part of the prior application. Should applicant desire to obtain the benefit of the filing date of the prior application, attention is directed to 35 U.S.C. 120 and 37 CFR 1.78.

4. Applicant states that this application is a continuation or divisional application of the prior-filed application. A continuation or divisional application cannot include new matter. Applicant is required to change the relationship (continuation or divisional application) to continuation-in-part because this application contains the following matter not disclosed in the prior-filed application: "above the trunk floor and outside any compartment containing a spare tire," as stated on lines 22-24 of p.1 of the specification; "FIGS. 5 and 6 are top views and FIG. 7 is a rear view of a trunk helpful in understanding the useful trunk volume." as stated on lines 9-10 of p. 2; "above the trunk floor 8 and outside any compartment containing the spare tire." as stated on lines 13-15 of p. 2; "When calculating trunk's volume, manufacturers neglect to count volumes that are ... in a small percentage of the useful trunk volume." as stated from line 32 of p. 2 to line 10 of p. 3.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1, 3-6 and 8-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claimed limitation in the instant application "said at least one speaker is disposed in a rearward section of the trunk occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said at least one speaker mounted in said rear deck" is specified in lines 8-10 of claim 1. The current specification discloses that "the speakers mounted in the rear deck reduce the calculated trunk volume of the vehicle" on lines 19-20 of p. 1, and "the enclosure in the corner of the trunk results in a smaller decrease in calculated useful trunk volume than do speakers mounted in the rear deck" on lines 29-31 of p. 2. Accordingly, the current specification and the drawing as filed on 12/24/1996 only disclose how to compare the useful trunk volume between speakers being mounted on the rear deck and the speaker being disposed in the trunk clear of the rear deck above the trunk floor and outside of the spare tire compartment, but fails to disclose how to compare the calculated useful

trunk volume with one speaker being mounted in the rear deck. Therefore, claim 1 introduces new matter which was not described in the specification as originally filed.

Claim Rejections - 35 USC § 103

7. In view of the priority being discussed above, the examination below is based on the assumption that the present application is filed as C-I-P with the filing date 12/24/1996.

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claim 1, 4-6, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hathaway et al (hereafter Hathaway) (US005394478A).

Regarding claim 1, Hathaway discloses an audio speaker system for a vehicle having a passenger compartment (8), a trunk having a trunk floor (Fig. 5), a dividing portion and a rear deck (col. 5, line 2; a sedan inherently includes a dividing portion and a rear deck), said dividing portion and said rear deck dividing the trunk and the passenger compartment, said audio speaker system comprising at least one low frequency speaker (4; col. 1, lines 9-10) disposed within the trunk of the vehicle at the trunk rear (see Fig. 5) in a location spaced from the passenger compartment by the portion of the trunk extending to the front of the vehicle (see Fig. 5) such that said at least one speaker (4) is clear of the rear deck (as shown in Fig. 5, the speaker is not mounted on the deck) above the trunk floor;

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wherein said at least one speaker is disposed in a rearward section of the trunk occupying negligible useful trunk volume ("without significant reduction of storage space" as stated in col. 5, lines 12-13).

The limitation "occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said at least one speaker mounted in said rear deck" is met by Hathaway's speaker. The term "out-of-the-way corner of the trunk" in Hathaway implies that the corner is an odd shaped corner or a secluded corner of the trunk that it is not convenient or big enough for storage purpose. Based on applicant's disclosure specified from line 32 of p. 2 to line 10 of p. 3 in view of Figs. 5-7, when car manufacturers calculate the trunk's volume, the useful trunk volume does not include the volume at the "out-of-the-way corner of the trunk". Hathaway also states that the placement of the speaker does not significantly reduce the storage space (col. 5, lines 12-13). So, Hathaway's speaker only causes a small percentage of the useful trunk volume decrement. As shown in Fig. 7 of applicant's disclosure, mounting the speaker to the deck would significantly reduce the useful trunk volume available due to the height and the diameter of the speaker, so a suitcase or a big box with sufficient dimension cannot be placed all the way inside the trunk to touch the dividing portion of the car under the rear deck. Therefore, based on applicant's disclosure, by placing the speaker as disclosed in Fig. 5 in an out-of-the-way corner of the trunk without significant reduction of storage space (lines 12-13 of col. 5), Hathaway discloses the limitation "said least one speaker is disposed in a rearward section of the trunk occupying

negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said at least one speaker mounted in said rear deck”.

Although Hathaway fails to disclose that the sedan includes a spare tire compartment; however, Examiner takes Official Notice that a sedan having a spare tire compartment is a well known fact to the general public. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made that Hathaway’s vehicle would have had a spare tire compartment, so a spare tire could be stored for emergency purpose.

Furthermore, it is well known to one of ordinary skill in the art that a spare tire could not be stored at an out-of-the-way corner of the trunk due to its circular shape. So the “out-of-the-way corner of the trunk” in Hathaway would not able to store a spare tire. Therefore, one skilled in the art could reasonably expected that the speaker in Hathaway stored at an “out-of-the-way corner of the trunk” is stored outside of a spare tire compartment.

Furthermore, Hathaway broadly teaches that one has to consider the storage space in the trunk when determining the speaker placement, so the speaker would not significantly reduce the useful trunk volume (col. 5, lines 12-13). Hathaway implies that the location of the low frequency speaker is a matter of trunk space management. Accordingly, one of ordinary skill in the art at the time of the invention was made would have been motivated, with the reference before him/her, to try and test different speaker mounting locations within the trunk, including an “out-of-way-corner of the trunk” outside

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of a spare tire compartment in order to find a best location for placing the low frequency speaker to generate the sound effect without significantly reducing the storage capacity.

Regarding claim 4, as shown in Fig. 5, the speaker in Hathaway is mounted in an enclosure.

Regarding claims 6 and 9, as shown in Fig. 5 of Hathaway, the deck is free of speaker holes. Furthermore, a hole (next to 3) is for mounting a pipe (2), not for mounting the speaker, so Hathaway also shows that the rear deck is free of a speaker hole.

Regarding claims 5 and 10, the claimed "undesired hole between 60-80 Hz" in the front seat frequency response of the speaker and "undesired peak in the rear seat frequency response of said vehicle between 80-100 Hz" are the frequency responses by mounting speakers to the rear deck. See lines 19-25 of p. 3 of applicant's disclosure. It is also noted that the term "undesired" is a relative term. So it is subject to an individual to determine how deep the hole is to be considered as an undesired hole, and it is also subject to an individual to determine as how high the peak is to be considered as an undesired peak. Therefore, the response produced by Hathaway's speaker would meet the claimed frequency response because (1) Hathaway's speaker is not mounted on the deck; and (2) an individual could subjectively consider the response produced by Hathaway's speaker as free of an undesired peak in the rear seat between 80-100 Hz and free of an undesired hole between 60-80 Hz in the front seat response.

Furthermore, Hathaway shows the actual frequency response in the passenger compartment in Fig. 6 without "undesired peak" between 80-100 Hz and "undesired

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hole" between 60-80 Hz (the terms "undesired peak" and "undesired peak" are subjective term depending on the classification of an individual). Although Hathaway fails to provide separate responses at the front seat and back seat, one skilled in the art would have expected that the front seat response or the back seat would not deviate significantly from the response as shown in Fig. 6. Since Hathaway's speaker is not directly mounted to the deck, one skilled in the art would have expected that Hathaway's speaker would produce the frequency response meet the claimed limitation "free of an undesired peak in the rear seat frequency response of said vehicle between 80-100 Hz and free of an undesired hole between 60-80 Hz in the front seat frequency response of said vehicle" depending on the designer's subjective thresholds on how deep the hole is to be considered as an undesired hole, and high the peak is to be considered as an undesired peak.

10. Claim 1, 4-6, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hutchins (US 4,572,326) in view Virva (US 4,164,988).

Regarding claim 1, Hutchins discloses an audio speaker system for a vehicle having a passenger compartment (col. 2, line 26), a trunk(16) having a trunk floor (although not shown, it is inherently included), a dividing portion (col. 2, lines 24-26) and a rear deck (18), said dividing portion and said rear deck dividing the trunk and the passenger compartment, said audio speaker system comprising at least one low frequency speaker (42a or 42b) disposed within the trunk of the vehicle at the trunk rear (see Fig. 1) in a location spaced from the passenger compartment by the portion of the

trunk extending to the front of the vehicle (see Fig. 1) such that said at least one speaker (4) is above the trunk floor and outside of the spare tire compartment.

Hutchins fails to show that the speaker is disposed in rearward section of the trunk occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said at least one speaker mounted in said rear deck. In the same field of endeavor, Virva teaches how to place a low frequency speaker (col. 3, line 17) with enhanced bass response in the trunk, so not to interfere with the storage handling capacity of the trunk (col. 6, lines 6-10). Based on applicant's disclosure specified from line 32 of p. 2 to line 10 of p. 3 in view of Figs. 5-7, when car manufacturers calculate the trunk's volume, the useful trunk volume does not include the volume occupied by the speakers mounted to the rear deck and the volume surround the speakers (see Fig. 7). So one skilled in the art would have expected that Hutchins' deck-mounted speakers occupy significant amount of useful trunk volume due to the height and diameter of the speakers enclosed in the enclosures as shown in Fig. 1. On the other hand, Virva suggests placing the speaker at a location inside the trunk not on the deck, so the user can still maintain the storage volume. So Virva's speaker occupies negligible useful trunk volume for storage. Therefore, Virva's suggested speaker location meets the claimed limitation "at least one speaker is disposed in a rearward section of the trunk occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said at least one speaker mounted in said rear deck". Thus, one of ordinary skill in the art at the time of the invention was made, with both references before him/her, would have been

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motivated to placing a low frequency speaker in a rearward section of the trunk instead of mounting it to the rear deck in order to enhance the low frequency response and maintain the storage capacity.

Regarding claims 3 and 8, Hutchins and Virva fail to show that the at least one speaker is disposed in a rear trunk corner at the rear of the vehicle. Virva broadly teaches that the designer has to consider the amount of the useful trunk volume left when placing the speaker and the flexible tube in the trunk (col. 6, lines 7-10). So, considering the amount of the space occupied by the speaker if it is being placing in the middle of the trunk, placing the speaker at the corner would seem to be one of several reasonable choices. Furthermore, one generally would not be able to store a big parcel or luggage at the corner of the trunk any way, so using the corner of the trunk for mounting speaker would not interfere with the normal trunk storage capacity.

Virva also teaches to make the speaker tube flexible to fit into any space in the trunk (col. 5, line 66+). Therefore, Virva does not limit the location of the speaker to be in the front or in the rear of the trunk at the rear of the vehicle. Accordingly, one of ordinary skill in the art at the time of the invention was made would have been motivated, with both references before him/her, to try and test different speaker mounting locations within the trunk, including the corner at the rear of the vehicle in order to find a best location for placing the enhanced bass response speaker without interfering the storage capacity.

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Furthermore, it has been held to be within the general skill of a worker in the art to rearrange the location of a part as a matter of design choice. In re Japikse, 86 USPQ 70.

Regarding claim 4, as shown in Fig. 5, the speaker in Virva is mounted in an enclosure.

Regarding claims 6 and 9, by modifying Hutchins in view of Virva, the rear deck is free of speaker holes.

Regarding claims 5 and 10, the claimed "undesired hole between 60-80 Hz" in the front seat frequency response of the speaker and "undesired peak in the rear seat frequency response of said vehicle between 80-100 Hz" are the frequency responses by mounting speakers to the rear deck. See lines 19-25 of p. 3 of applicant's disclosure. It is also noted that the term "undesired" is a relative term. So it is subject to an individual to determine how deep the hole is to be considered as an undesired hole, and it is also subject to an individual to determine as how high the peak is to be considered as an undesired peak. Therefore, Virva's speaker would produce the claimed frequency response because (1) Virva's speaker is not mounted on the deck; and (2) an individual could subjectively consider the response produced by Virva's speaker as free of an undesired peak in the rear seat between 80-100 Hz and free of an undesired hole between 60-80 Hz in the front seat response.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522.

The examiner can normally be reached on Monday, Wednesday and Friday.

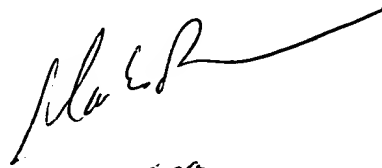
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ping Lee/
Primary Examiner, Art Unit 2615

pwl



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